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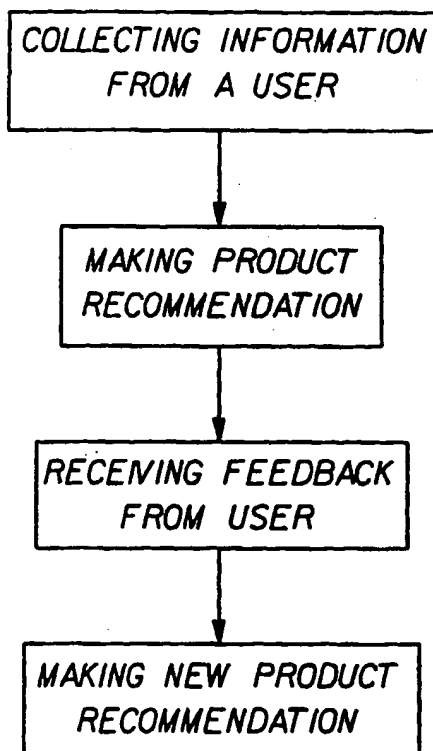
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(54) Title: A SYSTEM FOR THE SELECTION OF FEMININE HYGIENE PRODUCTS



(57) Abstract: A system for providing a female's most appropriate feminine hygiene product needs is provided. The system provides a means for collecting and processing user-specific information. The means provide a process having the steps of collecting information from a user, making a product recommendation based upon the user's collected information, receiving feedback about the product recommendation from the user prior to use of the product recommendation, and providing a new product recommendation to the user based upon the user's feedback.

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## A SYSTEM FOR THE SELECTION OF FEMININE HYGIENE PRODUCTS

### FIELD OF THE INVENTION

The invention provides a system for providing a female's most appropriate feminine hygiene product needs that includes the steps of collecting information from a user, making a product recommendation based upon the user's collected information, receiving pre-use feedback about the product recommendation, and providing a new product recommendation to the user based upon the user's feedback.

### BACKGROUND OF THE INVENTION

Feminine hygiene products such as sanitary napkins, pantliners, and incontinence pads are devices that are typically worn in the crotch region of an undergarment. Interlabial devices are feminine hygiene products that are typically designed to be worn within the interlabial space of a wearer. Other feminine hygiene devices such as tampons are designed to be worn within the vaginal interior. All of these devices are designed to absorb or otherwise contain liquid and other discharges from the human body and to prevent body and soiling of clothing. Sanitary napkins are a type of absorbent article worn by women in a pair of panties that is normally positioned between the wearer's legs, adjacent to the perineal area of the body.

Feminine hygiene products having many different basic designs are known in the art. There are some key features of these products, however, which affect the performance of such products. For example, feminine hygiene products such as sanitary napkins vary in their absorbent capacities, their length, the area of undergarment which they cover, their thickness, and their inclusion or non-inclusion of certain features such as wings or flaps.

Currently, feminine hygiene products such as sanitary napkins are typically sold in packages containing quantities of ten to fifty products of a single product type. As a result, many consumers buy and use a single type of product for all their menstrual

protection needs. This is the case even though the characteristics (e.g. length, area, and features) of a feminine hygiene product necessary to provide containment of bodily fluids without leaking may be quite different between daytime and overnight use. Similarly, the characteristics of a feminine hygiene product necessary to contain bodily fluids without leaking will vary for different groups of consumers based on such factors as body size and menstrual cycle characteristics.

Further complicating the present situation with respect to feminine hygiene products is the fact that the number of different types of products available often makes it confusing for consumers to determine which products would best meet their protection needs. In a recent survey of a typical retail store, 103 different types of feminine hygiene products were on display for sale to consumers. In another recent survey, roughly 70% of consumers reported purchasing the wrong type of sanitary napkin and/or pantiliner at least once within the six month period preceding the survey. Clearly, a need for feminine product customization exists for female hygiene product users.

It has been found in developing the present invention, that use by the consumer of a system of feminine hygiene products provides her with superior protection and comfort as compared to the use of a single type of product for all menstrual protection purposes. Nevertheless, the sheer number of options available makes the selection of an appropriate system difficult. Based upon the numbers of different types of products currently available for sale, it is estimated that there are well over 10,000 possible combinations of systems which contain only two different types of feminine hygiene products. When systems including more than two different products are considered, the number increases geometrically.

Ideally, an appropriate system of feminine hygiene products is chosen from two or more available systems where each of such systems is designed for a particular group of consumers. Membership in a particular group is based upon factors such as body size and menstrual cycle characteristics.

It has also been found during the development of the method of the present invention that many women (especially those who do not truly have a heavy flow intensity) are not proficient in accurately describing their flow intensity as compared to other consumers. Most currently available feminine hygiene products describe the differences between the various available products only in terms of a consumer's assessment of her own flow intensity or overall protection needs. It has been found that better product selection of systems of feminine hygiene products can be obtained by the method of the present invention which relies at least in part on indicators of protection needs other than simply perceived flow. Ideally, at least some of these indicators are objective pieces of information which should be readily known to most consumers. In this manner, consumers can be more reliably be provided with appropriate systems of feminine hygiene products without having to guess as to which products will best suit their needs. An ideal method for the selection and use of a system of feminine hygiene products also eliminates the need for consumers to select systems solely on the basis of subjective (and often inaccurate indicators) such as self-perception of flow intensity alone.

Another desire is to provide a customized feminine product selection system which can be used in an interactive medium like the internet. With the internet, a personal computer, and one or more servers, a user can access a computer program that allows a user to not only input objective data related to her flow characteristics, but also feedback and correct (i.e., "tweak") a computer's customized feminine product choices.

The concept of specialized product selection has been approached. U.S. Patent No. 5,839,585 issued to Miller on November 24, 1998, describes a method for dispensing absorbent articles that allows a user to select one or more types of absorbent articles. However, such selection does not provide for the use of a computer nor is an internet-based system discussed. U.S. Patent No. 5,865,322 issued to Miller on February 2, 1999 provides for the selection of feminine hygiene products using a computer but does not teach the interactive selection of feminine hygiene products (e.g., using a feedback engine) and such product selection on the internet is not provided. U.S. Patent No. 5,947,302

issued to Miller on September 7, 1999 gets a bit closer than the previous two patents by providing for the interactive computer selection of feminine products but such interactivity is limited to 3-4 inputs by a user and there is no feedback engine with which a user may correct or "tweak" a computer's choices; also, Miller '302 does not the use of such computer selection on the internet.

Therefore, it is an object of the present invention to provide a method for the selection and use of a customized system of feminine hygiene products.

It is another object of the present invention to provide a method for the customized selection of a system of feminine hygiene products from one or more available systems, the selection being based upon information gathered from the consumer regarding at least her body size and preferably certain characteristics related to her menstrual cycle.

It is also an object of the present invention to provide a method for the selection and use of a system of feminine hygiene products which system is adapted for a particular group of consumers and which when used will achieve a reduction in the incidence of soiling as compared to the use of a single type of feminine hygiene product.

It is a further object of the present invention to provide a reliable method for the selection and use of an appropriate system of feminine hygiene products in which the information gathered from consumers includes at least some objective pieces of information which are expected to be known by a majority of consumers.

These and other objects of the present invention will become more readily apparent when considered in reference to the following description and when taken in conjunction with the accompanying drawings.

### **SUMMARY OF THE INVENTION**

Accordingly, the invention provides a system for providing a user's most appropriate feminine hygiene product needs. Furthermore, the invention comprises a means for collecting and processing user-specific information. The means provides the steps of collecting information from a user, making a product recommendation based upon the user's collected information, receiving feedback about the product recommendation from the user prior to use of the product recommendation, and providing a new product recommendation to the user based upon the user's feedback. The system may further preferably comprise the additional step of packaging the user's customized feminine hygiene product selection for shipping. Also preferably, the new product recommendation will be delivered to the user. The user will use the product and then be provided at least one opportunity to give post-use feedback on the use of the new product recommendation to the system. Based upon this post-use recommendation, a new post-use product recommendation may be made.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

While the specification concludes with claims particularly pointing out and distinctly claiming the subject matter which is regarded as forming the present invention, it is believed that the invention will be better understood from the following descriptions which are taken in conjunction with the accompanying drawings in which like designations are used to designate substantially identical elements, and in which:

FIG. 1 is a flow chart showing one process of product selection herein; and

FIG. 2 is a flow chart showing another process of product selection herein.

### **DETAILED DESCRIPTION OF THE INVENTION**

The invention provides a system for providing a user's most appropriate feminine hygiene product needs. Furthermore, the invention comprises a means for collecting and

processing user-specific information. The means provides the steps of collecting information from a user, making a product recommendation based upon the user's collected information, receiving feedback about the product recommendation from the user prior to use of the product recommendation, and providing a new product recommendation to the user based upon the user's feedback. The system may further preferably comprise the additional step of packaging the user's customized feminine hygiene product selection for shipping (i.e., shipping the product to the user). Also preferably, the new product recommendation will be delivered to the user. The user will use the product and then be provided opportunity to give post-use feedback on the use of the new product recommendation to the system. Based upon this post-use feedback, a new post-use product recommendation may be made, and preferably will be made.

All of the above steps may be accomplished by hand by an independent operator collecting information from a user. Most preferably, the above functions involve some sort of input into a computer at one or more stages of data collection and processing of a user's information. For example, a computer may be used that houses a program created for specified user input. By the term "specified user input" it is meant herein that a computer program that asks specific questions related to a user's physiological make-up, physical make-up, and psychographic disposition regarding her menstrual cycle.

The computer program is preferably one specially designed to garner clear and accurate responses from a female user about her physiological make-up, physical make-up, and psychographic disposition regarding her menstrual cycle. By the term "psychographic disposition" or "psychographic" it is meant herein information that specifically relates to a female's attitude (i.e., mental and/or emotional disposition) about her menstrual cycle (i.e., her full 28-30 day cycle). Furthermore, a female's psychographic information is used to identify a female's predisposition to use a product by gauging her attitude and/or mood regarding her period. For example, see EXAMPLE I below. It has been statistically shown that a female's attitude about her period coupled with some of her basic personality traits can provide a predisposition to use at least one type of product for menstruation protection over another.



The computer program may be based on a personal or laptop computer or on a server that is accessible by one or more other servers and/or computers. Most preferably, the computer program is accessible via the internet via a dial-up connection or through a computer network. The computer program may also be accessible by a simple dial-up connection that circumvents the internet.

One main goal of the program is to provide a highly interactive experience between the user and the interactive feedback data processing system (IFDP). Another goal is to provide a female user with a truly customized feminine hygiene product selection. The product selection may include one or more types of products in specialized and preferably personalized packaging not available in an off the store shelf type of selection. In providing feedback about her initial product recommendation, the user may alter the number of products selected, the types selected and the specialized and/or personalized packaging provided, if any is recommended. From this pre-use feedback, the IFDP makes another product recommendation now using the pre-use feedback provided by the user. By the term "pre-use feedback" it is meant herein the feedback initially provided by a user before she has an opportunity to use her product recommendation.

Once the IFDP makes the second or new product recommendation. A user may then elect to have her recommendation specially packaged and then sent to her. It is also possible for the user, before her final product recommendation is made, to provide additional feedback before a final product recommendation is made by the IFDP. Once a final product recommendation is made, the product is said to be customized, i.e., made and numbered for a female product selector's personal use.

In one embodiment herein, an interactive feedback data processing system for customizing a user's most appropriate feminine hygiene product needs is used. The system comprises a personal computer used by a user and at least one server connected to the personal computer by one or more connections. A computer program is preferably located on the server and is accessible by the user through the connection. The computer program provides a method having the steps of the following:

- i. collecting information from a user,

- ii. making a feminine hygiene product recommendation based upon the user's collected information,
- iii. using a feedback engine within the computer program to customize the collected information from the user,
- iv. calculating the most appropriate product choices for the user,
- v. selecting a customized system of feminine hygiene products from at least two available systems, wherein each of the available systems is comprised of at least two different hygiene products, and wherein the customized system of feminine hygiene products is selected based upon the information collected from the user,
- vi. communicating the customized feminine hygiene product selection to the user, and
- vii. using the feedback engine to verify and finalize with the user the user's customized feminine hygiene product selection.

In yet another embodiment herein, but using the above seven steps, an interactive, internet-based data processing system for customizing a user's most appropriate feminine hygiene product needs is provided comprising a personal computer used by a user that is connected to at least one server through the internet. In other words, the user's personal computer and the server are connected to one-another via an internet connection. As in the previous embodiment, one or more computer programs is located on the server.

#### EXAMPLE

Which one better describes your view of the IDEAL period?

A) Get totally made up and beautiful and into the most awesome clothes, then get whisked off by plane to a tropical island where there are totally gorgeous guys waiting to meet me.

B) Have a luxurious bath and then lie down on the most comfortable couch with a big box of luscious chocolates and watch all my favorite movies on TV and talk on the phone with my friends.

Answer "A" would result in a recommendation including tampons, while answer "B" would include pads. The above questions are specifically designed to trigger and then identify a female's attitude and/or mood evoked by her period. The above kinds of questions are targeted at teenagers.

The disclosures of all patents, patent applications (and any patents which issue thereon, as well as any corresponding published foreign patent applications), and publications mentioned throughout this patent application are hereby incorporated by reference herein. It is expressly not admitted, however, that any of the documents incorporated by reference herein teach or disclose the present invention. It is also expressly not admitted that any of the commercially available materials or products described herein teach or disclose the present invention.

## WHAT IS CLAIMED IS:

1. A system for providing a user's most appropriate feminine hygiene product needs, comprising:  
a means for collecting and processing user-specific information, said means providing the steps of
  - i. collecting information from a user, making a product recommendation based upon the user's collected information,
  - ii. receiving feedback about the product recommendation from the user prior to use of the product recommendation, and
  - iii. providing a new product recommendation to the user based upon the user's feedback.
2. The system of Claim 1 further comprising the additional step of packaging the user's customized feminine hygiene product selection.
3. A system for providing a user's most appropriate feminine hygiene product needs, comprising:  
a means for collecting and processing user-specific information, said means providing the steps of
  - i. collecting information from a user,
  - ii. making a product recommendation based upon the user's collected information,
  - iii. receiving pre-use feedback about the product recommendation from the user prior to use of the product recommendation,
  - iv. providing a new product recommendation to the user based upon the user's feedback,
  - v. packaging the new product recommendation;
  - vi. delivering the new product recommendation to the user;
  - vii. using the new product recommendation;

- viii. providing post-use feedback on the use of the new product recommendation by the user; and
  - ix. providing a new product recommendation based upon the user's post-use feedback.
4. An interactive feedback data processing system for customizing a user's most appropriate feminine hygiene product needs, comprising:  
a means for interactively collecting and processing user-specific information, said means providing the steps of
- i. collecting information from a user,
  - ii. making a product recommendation based upon the user's collected information,
  - iii. using a feedback engine to customize the collected information from the user,
  - iv. calculating the appropriate product choices for the user based upon the user's collected information and feedback,
  - v. selecting a customized system of feminine hygiene products from at least two available systems, wherein each of the available systems is comprised of at least two different hygiene products, and wherein the customized system of feminine hygiene products is selected based upon the information collected from the user,
  - vi. communicating the customized feminine hygiene product selection to the user, and
  - vii. using the feedback engine to verify and finalize with the user the user's customized feminine hygiene product selection.
5. The interactive feedback data processing system of Claim 1 wherein the means for interactively collecting and processing user-specific information includes the additional step of packaging the user's customized feminine hygiene product selection for shipping.

6. The interactive feedback data processing system of Claim 1 wherein the user-specific information is selected from the group consisting of physical make-up data, psychographic data, age data and combinations thereof.
7. The interactive feedback data processing system of Claim 1 wherein the user-specific information is used to provide at least one additional targeted sample with the user's customized feminine hygiene product selection, the targeted sample not being recommended to the user.
8. An interactive feedback data processing system for customizing a user's most appropriate feminine hygiene product needs, comprising:  
a means for interactively collecting and processing information, said means providing the steps of
  - i. collecting information from a user,
  - ii. making a feminine hygiene product recommendation based upon the user's collected information,
  - iii. using a feedback engine to customize the collected information from the user,
  - iv. calculating the most appropriate product choices for the user based upon the user's collected information and feedback,
  - v. selecting a customized system of feminine hygiene products from at least two available systems, wherein each of the available systems is comprised of at least two different hygiene products, and wherein the customized system of feminine hygiene products is selected based upon the information collected from the user,
  - vi. communicating the customized feminine hygiene product selection to the user,
  - vii. using the feedback engine to verify and finalize with the user the user's customized feminine hygiene product selection,
  - viii. delivering the user's customized feminine hygiene product selection to the user,
  - ix. receiving post-use feedback from the user on the customized feminine hygiene product selection after use thereof, and

- x. making a new product recommendation to the user calculated from the received post-use feedback.
9. An interactive feedback data processing system for customizing a user's most appropriate feminine hygiene product needs, comprising:
- a. a personal computer used by a user,;
  - b. at least one server, the server being connectable to the personal computer by a connection;
  - c. a computer program located on the server and being accessible by the user through the connection, the computer program having a method providing the steps of
    - i. collecting information from a user,
    - ii. making a feminine hygiene product recommendation based upon the user's collected information,
    - iii. using a feedback engine to customize the collected information from the user,
    - iv. calculating the most appropriate product choices for the user,
    - v. selecting a customized system of feminine hygiene products from at least two available systems, wherein each of the available systems is comprised of at least two different hygiene products, and wherein the customized system of feminine hygiene products is selected based upon the information collected from the user, and
    - vi. communicating the customized feminine hygiene product selection to the user,
    - vii. using the feedback engine to verify and finalize with the user the user's customized feminine hygiene product selection.
10. An interactive, internet-based data processing system for customizing a user's most appropriate feminine hygiene product needs, comprising:
- a. a personal computer used by a user, the personal computer being connectable to the internet;
  - b. at least one server, the server being connectable to the internet;

- c. an internet connection established between the personal computer and the at least one server; and
  - d. a computer program located on the server and being accessible by the user through the internet connection, the computer program having a method providing the steps of
    - i. collecting information from a user using a computer used by the user, the computer being connected to the internet, and at least one server connected to the internet, the server containing the internet-based feedback system,
    - ii. making a feminine hygiene product recommendation based upon the user's collected information,
    - iii. making a feminine hygiene product recommendation based upon the user's collected information,
    - iv. using a feedback engine to customize the collected information from the user,
    - v. computing the most appropriate product choices for the user,
    - vi. selecting a customized system of feminine hygiene products from at least two available systems, wherein each of the available systems is comprised of at least two different hygiene products, and wherein the customized system of feminine hygiene products is selected based upon the information collected from the user,
    - vii. communicating the customized feminine hygiene product selection to the user,
    - viii. using the feedback engine to verify the user's customized feminine hygiene product selection, and
    - ix. finalizing the user's computer calculated feminine hygiene product selection.
11. A method of interactively collecting and processing information to provide the most appropriate, customized feminine hygiene product selection, comprising:
- a. collecting information from a user,
  - b. making a feminine hygiene product recommendation based upon the user's collected information,
  - c. using a feedback engine to customize the collected information from the user,



- d. calculating the most appropriate product choices for the user,
- e. selecting a customized system of feminine hygiene products from at least two available systems, wherein each of the available systems is comprised of at least two different hygiene products, and wherein the customized system of feminine hygiene products is selected based upon the menstrual and psychographic information collected from the user,
- f. communicating the customized feminine hygiene product selection to the user, and
- g. using the feedback engine to verify and finalize with the user the user's customized feminine hygiene product selection.

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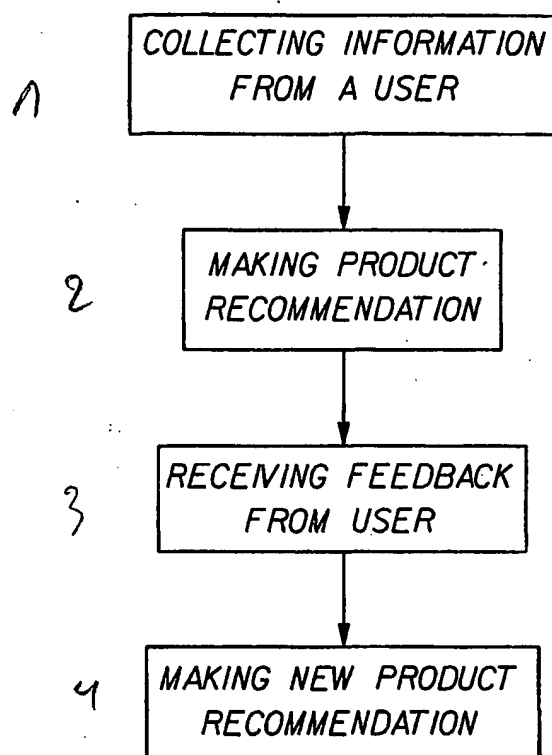


Fig. 1

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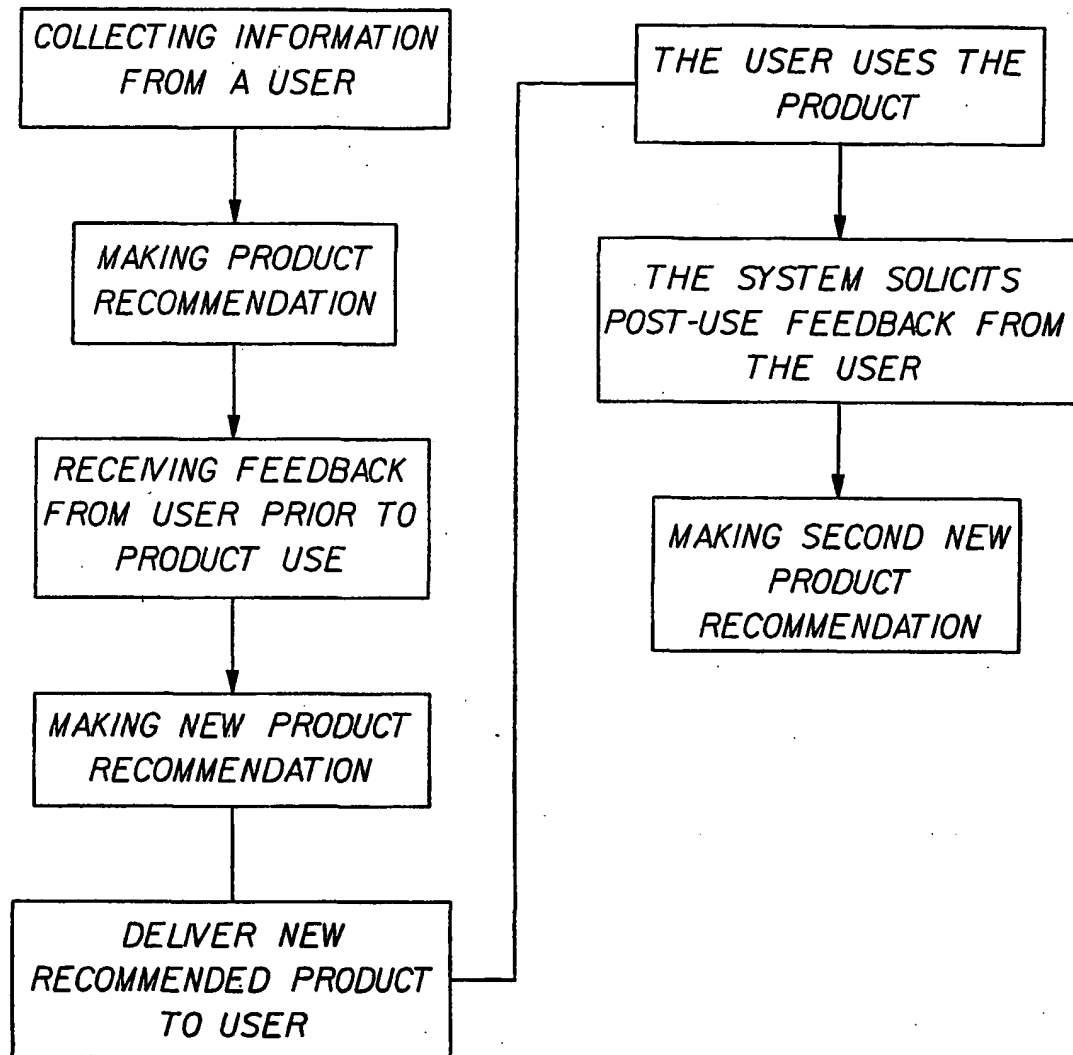


Fig. 2